

CLAIMS

What is claimed is:

- 1 1. The method of making a golf ball mold half which comprises:
 - 2 a. forming a golf ball hob having an arcuate surface defined by at least two arcs
 - 3 having different center points;
 - 4 b. contacting the arcuate surface of the golf ball hob with a golf ball mold blank; and
 - 5 c. applying pressure to cause a negative of at least the arcuate surface of the golf ball
 - 6 hob shape to be imparted to the golf ball mold blank to form the golf ball mold half.
- 1 2. The method of claim 1, wherein the arcuate surface has a pole, an equator
- 2 edge, and a profile from the pole to the equator edge, wherein the profile is composed of at
- 3 least two arcs.
- 1 3. The method of claim 2, wherein the profile comprises at least three arcs.
- 1 4. The method of claim 2, wherein the profile comprises three arcs each
- 2 extending 30 degrees.
- 1 5. The method of claim 2, wherein the profile comprises:
 - 2 a first arc extending 30 degrees from the pole toward the equator edge and having a
 - 3 first radius;
 - 4 a third arc extending 30 degrees from the equator edge toward the pole and having a
 - 5 third radius and; and
 - 6 a second arc extending 30 degrees between the first arc and the third arc, and having
 - 7 a second radius, wherein the first radius and the third radius are larger than the second
 - 8 radius.
- 1 6. The method of claim 5, wherein the first radius and the third radius are equal.
- 1 7. The method of claim 2, wherein each arc is in a continuous arrangement to
- 2 each adjacent arc.
- 1 8. The method of claim 2, wherein each arc is in a tangential arrangement to
- 2 each adjacent arc.

1 9. The method of making a golf ball mold half which comprises:
2 a. forming a golf ball hob having an imperfectly spherical three-dimensional
3 contour;
4 b. contacting the contour of the golf ball hob with a golf ball mold blank; and
5 c. applying pressure to cause at least a negative of the contour of the golf ball hob
6 shape to be imparted to the golf ball mold blank to form the golf ball mold half.

1 10. The method of claim 9, wherein the contour has a profile comprising at least
2 two different arcs joined in a continuous arrangement.

1 11. The method of claim 10, wherein the at least two different arcs are joined in
2 a tangential arrangement.

1 12. The method of claim 9, wherein the contour has a pole and an equator edge,
2 and a profile has a first radius of curvature near the pole, a third radius of curvature near the
3 equator edge, and a second radius of curvature between the first radius of curvature and
4 third radius of curvature, wherein the first radius of curvature and the third radius of
5 curvature are greater than the second radius of curvature.

1 13. A method of making a golf ball comprising:
2 a. providing first and second golf ball mold halves, each mold half having a cavity
3 with an arcuate surface defined by at least two arcs having different center points;
4 b. placing a golf ball subassembly into a golf ball mold cavity defined by the cavity
5 of the first golf ball mold half and the cavity of second golf ball mold half; and
6 c. disposing a cover material within the golf ball mold cavity around the
7 subassembly.

1 14. The method of claim 13, wherein the golf ball subassembly is a solid core.

1 15. The method of claim 13, wherein the golf ball subassembly comprises a
2 center of polybutadiene and at least one intermediate layer formed around said center.

1 16. The method of claim 15, wherein the at least one intermediate layer is a
2 thermoplastic polyurethane.

1 17. The method of claim 15, wherein the at least one intermediate layer is an
2 ionomer resin with an acid content of less than 20 weight percent.

1 18. The method of claim 13, wherein the golf ball subassembly is a two-piece
2 core comprising a solid center and an intermediate layer wound around said center.

1 19. The method of claim 13, wherein the golf ball subassembly is a two-piece
2 core comprising a liquid filled center and an intermediate layer wound around said center.

1 20. The method of claim 13, wherein the cover material is a thermoset
2 polyurethane.

1 21. The method of claim 13, wherein the cover material is a castable
2 polyurethane.

1 22. The method of claim 13, wherein the cover material is an ionomer or an
2 ionomer blend.

1 23. The method of claim 13, wherein the cover material is a thermoplastic
2 elastomer or a thermoplastic polyurethane.